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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,609	04/02/2004	Kia Silverbrook	HYT001US	9420
24011 7590 04/17/2008 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA				
EXAMINER				
GRANT II, JEROME				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,609

Applicant(s)

SILVERBROOK ET AL.

Examiner

Jerome Grant II

Art Unit

2625

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-33 and 46-75 is/are rejected.
- 7) ☒ Claim(s) 16 and 34-46 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 2-07, 10-04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Detailed Action

1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6, 12-15, 19-33, 49 and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt.

With respect to claim 1, Schmidt teaches a laser scanner 2 adapted to scan an interface surface 436 provided on a product item 435, the interface surface having disposed thereon or therein coded (bar code) data which includes, at a plurality of locations on the interface surface, a corresponding plurality of coded data portions, each coded data portion being indicative of an identify of the product item, the product item being provided in a sensing region (object detection field, see also , col. 17, lines 60-67 including: a laser 39 for emitting at least one scanning beam, the scanning beam being directed in first and second orthogonal directions to thereby generate a raster scan pattern over a scanning patch, the scanning patch being provided in the sensing region such that it exposes the coded data portion; a sensor 41 for sensing the exposed coded data portion; and a processor 40 for determining, using a t least some of the sensed coded data related to the identified product.

With respect to claim 2, Schmidt teaches an EPC associated with the product item. This is the product identification referred to at; col. 11, lines 52-65, col. 13, lines 15-20 and col. 14, lines 6-9.

With respect to claim 3, Schmidt teaches the product identity is unique to the product. See also col. 13, lines 15-20.

With respect to claim 4, Schmidt teaches a generation of a scan identity with respect to the product as referred to at col. 17, lines 60-67.

With respect to claim 5, Schmidt teaches the claimed limitation with respect to col. 17, line 60 to col. 18, line 26.

With respect to claim 6, the product identification during a scanning event and generates product data when different data had been previously determined before (such as error data). See col. 17, line 60 to col. 18, lines 26.

With respect to claim 12, Schmidt teaches a plurality of points taken together which constitutes a bar code and the region of the barcode.

With respect to claim 13, Schmidt teaches a reference point such as the object detection filed for generating position data A(1) representing the sensed portion of the interface point of the product.

With respect to claim 14, Schmidt teaches data indicative of the identify of the region A(1) wherein the processor determines the identity of the region from at least some of the sensed coded data (bar code data). See also col. 17, lines 60-67.

With respect to claim 15, Schmidt teaches at least one coded data portion 9bar coded filed) and wherein the coded data portion is indicative of the region identity (identified as A(1)). See also col. 17, lines 60-67.

With respect to claim 19, Schmidt teaches first and second acoustic optic deflectors 38 (a-e) for deflecting a beam orthogonally; a sensor 41 for sensing a product in a sensing region (see col. 15, lines 8-18).

With respect to claim 20, Schmidt teaches at least one rotating holographic (3D) scanning element with a polygonal mirror 36 and mirror 38(a-e) for performing a holographic effects) and first and second optical acoustic deflectors, which are at least the other of 38(a-e).

With respect to claim 21, Schmidt teaches the modulator 39 for the purpose claimed.

With respect to claim 22, this claim is inherent with respect to the nature of sensor 41 as the laser beam from generator 39 is modulated by 38(a-e and mirror 36).

With respect to claim 23, the claimed focusing element is 384 of Schmidt.

With respect to claim 24, the filter as claimed corresponds to element 186A and is suggested to be a band-pass filter type.

With respect to claim 25, the beam controller is polygon mirror 36 and mirrors 38(a-e).

With respect to claim 26 the plurality of beam paths are taught at col. 16, line 65 to col. 17, line 5.

With respect to claim 27 see figures 6a1.

With respect to claim 28, col. 16, lines 5-10 show the 90 degrees between the patch and the beam path. See also mirrors 38(a-e).

With respect to claim 29, Schmidt teaches a first mirror 38(a); a plurality of second mirrors 38(b-e) and a controller (motor for rotating the polygon mirror 36) so that the beam is reflected to the first and second mirrors.

With respect to claim 30, Schmidt teaches wherein the mirror 38(b-e) controls a beam path and wherein the controller controls the position of the first mirror to thereby direct the scanning beam along a selected path beam path. See also the teaching at col. 16, line 65 to col. 17, line 5.

With respect to claim 31, Schmidt teaches a sensor 41 is adapted to sense radiation reflected from the product item along the selected patch beam path.. See col. 15, lines 8-18.

With respect to claim 32, the limitation is inherent in that the product devices with product codes can be read near simultaneously with respect to the rate each product can be processed.

With respect to claim 33, Schmidt teaches a processor 40 is adapted to determine the presence of barcode data during a scanning event by scanner 2; Schmidt at least suggests that if one item can be detected, then a plurality of items can be detected one after the other. Schmidt also teaches the scanner will determine the product identity corresponding with the detected data, see col. 17, line 50 - col. 18, line 26 and activating an alarm if more than one product item is detected. This alarm detection operates, according to Schmidt, when a detection of a scanned object in a short or long

range mode is detected. When $A(1) = 1$, a signal is generated when an object is determined to be present within the object detection field of the bar code symbol reading device. A control circuit generates an enable signal $E(o)$. See col. 20, lines 40-50. A digital pulse counter counts to a predetermined threshold during which time, the barcode is detected. Upon detecting the barcode, a second activation, $A(2)$ is generated, and a control value $C(3)$ allows the contents of the barcode to be processed.

If two bar codes are read in the same clock period, the barcode information will be improperly read since the system reads one at a time. Hence, an error code will be generated producing an audible alarm signal by the base unit. See col. 30, lines 10-19.

With respect to claim 49, the memory for storing the product identity is shown by figure 8-2.

With respect to claim 54, at least subparts (b) and (c) of this claim are inherent with respect to the object detection field. A product code could cover at least 25% of the area of the product that is scanned.

2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 17, 18, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Umeto.

With respect to claim 7, Schmidt teaches all of the subject matter upon which the claim depends except for generating inventory for an existing product and comparing the product identify with respect to a pre-determined stored identity.

Umeto teaches a barcode management system whereby a new product label can be identified for a unique product by comparing the product with respect to predetermined product identification stored in sections 120/130.

Since Schmidt and Umeto are both directed toward processing barcode signals as they relate to product items, the purpose of storing unique identification for new products would have been contemplated by Schmidt as set forth by Umeto.

It would have been obvious to use the processing and storage means of Umeto and modify Schmidt so that it includes these additional features for storing unique product numbers as is determined by Umeto.

With respect to claims 17 and 18, Umeto teaches a keyboard section 140 for providing a user interactive element. Here, data about the product can be added to a barcode. Also, the added data can be encoded to the barcode data further identifying the product and the result of the new label printed out. See col. 5, line 65 – col. 6, line 7; col. 6, lines 20-28; col. 6, lines 51-56 and col. 7, lines 35-47 of Umeto.

Since, Schmidt and Umeto are both directed to a bar code inputting device, the purpose of using interactive and printing devices, as claimed, would have been recognized by Schmidt as set forth by Umeto.

It would have been obvious to modify base unit 3 of Schmidt to include the interactive and printing device of Umeto to make the present invention.

With respect to claim 47, Schmidt teaches all of the subject matter except infrared ink.

Umeto teaches using a printer 300. It would have been obvious to one of ordinary skill in the art to use infrared ink in printer 300 so that a printed label can be detected by an IR scanner (such as a barcode reader using a laser) for the purpose of reading product indicia.

With respect to claim 48, Schmidt teaches all of the subject matter claimed except for the interface as claimed.

Umeto teaches a keyboard section 140 for providing a user interactive element. Here, data about the product can be added to a barcode. Also, the added data can be encoded to the barcode data further identifying the product and the result of the new label printed out. See col. 5, line 65 – col. 6, line 7; col. 6, lines 20-28; col. 6, lines 51-56 and col. 7, lines 35-47 of Umeta.

Since, Schmidt and Umeta are both directed to a bar code inputting device, the purpose of using interactive and printing devices, as claimed, would have been recognized by Schmidt as set forth by Umeto.

It would have been obvious to modify base unit 3 of Schmidt to include the interactive and printing device of Umeta to make the present invention.

3.

Claims 8-11 and 64-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt.

With respect to claims 8-11, Schmidt teaches using error correcting techniques to avoid inputting the erroneous data from the scanner. See col. 29, lines 30-37. While the use of redundancy coding or Solomon-Reed coding is well known among error correction schemes, from fax to image or voice transmissions, the use of CRC or other redundancy schemes would have been contemplated by the skilled artisan.

It would have been obvious to use redundancy coding as an error correcting method to be utilized by Schmidt.

Such coding inherently includes signaling a failed scanned attempt and the rejection of erroneous data. The error is corrected by rescanning such that no errors are detected. Other reconstruction of fragmented codes are well known in the art for reconstructing signals which may have been lost during a barcode scan.

With respect to claim 64, Schmidt teaches an interface surface 436 on a product item 435, a plurality of locations, barcode lines on the interface, corresponding to coded portions, each coded portion identifies the product item by the scanning device (elements 1-3). Schmidt teaches the scanning device including a laser (generated by beam generator 39) and reflectors 38(a-e) for generating orthogonal beams to thereby generate a raster scan pattern over a scanning patch as claimed; a sensor 41 for sensing the at least one exposed coded data portion; and a processor 40 for determining the product identity.

Schmidt does not teach that the products that are being scanned have multiple coded portions. However, if one coded portion is provided on a package, the use of multiple coded portions for larger items would be contemplated by a manager intending to inventory and sale the items in an expeditious manner.

the use of multiple barcodes is contemplated by Schmidt in that if one can be used, a plurality can be used to increase the probability of obtaining an easier read by a POS operator scanning the product device. This is especially contemplated for large or bulky items where a product code on the bottom makes it very difficult for the operator to lift the large package or turn it upside down, possible dislodging the packaging contents, for the purpose of reading the barcode.

With respect to claim 65, Schmidt teaches wherein the coded data (bar code data) is adapted to be sensed by the scanning device (figures 1-3).

With respect to claim 66, Schmidt teaches the coded data printed on the interface surface 436.

With respect to claims 67 and 68, at least subparts (b) and (c) of this claim are inherent with respect to the objected detection field. A product code covers at least 25% of the area of the product that is scanned (depending on the size of the product). It is inherent to print labels for bar codes that are 25% of the size of the object that is being coded.

With respect to claims 69, 70 and 72, Schmidt teaches a beam generator 39 as claimed, a beam controller 38(a-e) and polygonal mirror 36 for the purpose claimed; a sensor 41 for obtaining coded data from an interface surface of the product item; and a processor 40 for processing the identity of the coded data.

What is not specifically taught is the simultaneous use of two or more scanners.

Schmidt provides that if one scanner can be used then a second scanner may also be used, for example, in a wired communication mode, instead of use an acoustic communication mode. Thereby, one of ordinary skill in the art would have known to use a plurality of scanners for reading barcode information from a product.

With respect to claim 71, Schmidt teaches an interface surface 436 on a product item 435, the scanning device including a laser (generated by beam generator 39) and reflectors 38(a-e) for generating orthogonal beams to thereby generate a raster scan pattern over a scanning patch as claimed; a sensor 41 for sensing the at least one exposed coded data portion; and a processor 40 for determining the product identity.

Schmidt does not teach that the products that are being scanned have multiple coded portions. However, if one coded portion is provided on a package, the use of multiple coded portions for larger items would be contemplated by a manager intending to inventory and sale the items in an expeditious manner.

the use of multiple barcodes is contemplated by Schmidt in that if one can be used, a plurality can be used to increase the probability of obtaining an easier read by a POS operator scanning the product device. This is especially contemplated for large or bulky items where a product code on the bottom makes it very difficult for the operator to lift the large package or turn it upside down, possibly dislodging the packaging contents, for the purpose of reading the barcode.

With respect to claim 73, Schmidt does not teach that the products that are being scanned have multiple coded portions. However, if one coded portion is provided on a package, the use of multiple coded portions for larger items would be contemplated by a manager intending to inventory and sale the items in an expeditious manner.

Schmidt teaches the use of multiple barcodes is contemplated by Schmidt in that if one can be used, a plurality can be used to increase the probability of obtaining an easier read by a POS operator scanning the product device. This is especially contemplated for large or bulky items where a product code on the bottom makes it very difficult for the operator to lift the large package or turn it upside down, possibly dislodging the packaging contents, for the purpose of reading the barcode.

Schmidt teaches a housing 2 adapted to be held by a user in use (see figure 1); a laser generated from 39 directed to become a scanning beam traversing first and second orthogonal directions to generate a raster scan; a sensor 41 for sending the one exposed coded data portions; and a processor 40 for determining, the product identity.

With respect to claim 74, Schmidt teaches a reading device 2 adapted to read an interface surface 436 provided on a product item 435 for the purpose claimed, the reading device including: a housing 2 for mounting on a finger (hand held device); a radiation source (39) for illuminating the coded data; a sensor 41 for reading the coded data; a processor 40 for processing the sensed coded data.

Schmidt does not teach that the products that are being scanned have multiple coded portions. However, if one coded portion is provided on a package, the use of multiple coded portions for larger items would be contemplated by a manager intending to inventory and sale the items in an expeditious manner.

With respect to claim 75, Schmidt teaches an interface surface 436 having disposed barcode data which includes a plurality of locations the reading device including: a housing 2 adapted to be held by the user; a radiation source 39; image sensor 41 and processor 40 for determining the sensed coded data.

Schmidt does not teach that the products that are being scanned have multiple coded portions. However, if one coded portion is provided on a package, the use of multiple coded portions for larger items would be contemplated by a manager intending to inventory and sale the items in an expeditious manner.

The use of multiple barcodes is inherent by Schmidt in that if one can be used, a plurality can be used to increase the probability of obtaining an easier read by a POS operator scanning the product device. This is especially contemplated for large or bulky items where a product code on the bottom makes it very difficult for the operator to lift the large package or turn it upside down, possible dislodging the packaging contents, for the purpose of reading the barcode.

4.

Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Kumar.

Schmidt teaches all of the subject matter upon which the claims depend except for the specific holding in a shopping receptacle.

While Schmidt does teach a receptacle 3, it is not clear if it can be housed in a shopping trolley, cart or basket.

Kumar does teach col. 6, 24-49 that the scanning device can be housed on a belt receptacle 146 or a worn as a neckless with a neck receptacle assembly 147.

Conceivably, both receptacles 146 and 147 can be placed in a shopping trolley, cart or basket for affecting portable usage of the scanning device.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the scanning device of Schmidt so that it can be worn around the belt, neck or held in a shopping trolley, cart or basket by means of receptacles 146 and 147 which may be attached to the shopping cart, basket or trolley.

5.

Claims 55-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Novak.

With respect to claims 55 and 56 Schmidt teaches all of the subject matter except for the conveyor as claimed.

Novak teaches a conveyor 1 in which product items are scanned over a continuous belt and one read by a scanner 10.

Since, Schmidt and Novak are directed toward scanning product devices with barcodes, the purpose of using a conveyor would have been recognized by Schmidt as set forth by Novak.

It would have been obvious to mount the scanner 2 of Schmidt into the base 3 and place a product item on a conveyor, as Novak teaches, for the purpose of scanning the product devices as suggested by Novak.

With respect to claim 57 Schmidt teaches this limitation in that the product devices with product codes can be read near simultaneously with respect to the rate each product can be processed.

With respect to claim 58, Schmidt teaches this limitation in that the product devices with product codes can be read near simultaneously with respect to the rate each product can be processed.

With respect to claim 59, Schmidt teaches at least an audible alarm, see col. 30, lines 10-19 of Schmidt.

With respect to claim 60, the memory for storing the product identity is shown by figure 8-2.

With respect to claim 61, Schmidt teaches a communicator 106, adapted to communicate with a computer system (base 3), see figure 1a adapted to send to the computer at least one of the product identify data (code symbol); and the scan data (bar code data) see also col. 17, lines 23-32, 48-52 and 60-67.

Art Unit: 2625

With respect to claim 62, Schmidt teaches a memory located in the base unit 3 which is synonymous with the computer system.

With respect to claim 63, the scanning device 2 is taught by Schmidt.

6.

Claims Objected to As Containing Allowable Subject Matter

Claims 16, 34-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2625

7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles, can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jerome Grant II/

Primary Examiner, Art Unit 2625